ABSTRACT OF THE DISCLOSURE

A compound that includes at least Si, N and C in any combination, such as compounds of formula $(R\text{-}NH)_{4-n}SiX_n$ wherein R is an alkyl group (which may be the same or different), n is 1, 2 or 3, and X is H or halogen (such as, e.g., bis-tertiary butyl amino silane (BTBAS)), may be mixed with silane or a silane derivative to produce a film. A polysilicon silicon film may be grown by mixing silane (SiH_4) or a silane derviative and a compound including Si, N and C, such as BTBAS. Films controllably doped with carbon and/or nitrogen (such as layered films) may be grown by varying the reagents and conditions.